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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/610,305	07/05/2000	TOSHIMICHI HARADA	106656	4202

25944 7590 08/30/2002

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EXAMINER

NGUYEN, KIMBERLY T

ART UNIT	PAPER NUMBER
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1774

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DATE MAILED: 08/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/610,305

Applicant(s)

HARADA ET AL.

Examiner

Kimberly T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5 and 8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

This action is in response to the amendment submitted on March 18, 2002.

Claim Rejections - 35 USC § 112

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

Claim Rejections - 35 USC § 103

Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura, U.S. Pat. No. 6,210,794 B1 in view of Coleman, U.S. Pat. No. 5,741,387 as previously stated in the Office Action submitted on December 17, 2001.

As to the new limitations added to claim 1 of the weight ratio of wax to styrene resin being from 10:90 to 90:10, respectively, and that the temperature of compatibility is at least 30°C more than the melting points of the wax and styrene resin, Nakamura shows candellila wax and styrene resin (column 5, lines 19-34 and column 4, lines 6-35). Nakamura shows that it is known that the wax and styrene are compatible and are used together in a thermal transfer sheet (column 5, lines 19-34 and column 4, lines 6-35).

Though Nakamura does not specifically show that the weight ratio of the wax to styrene resin is within the range of 10:90 to 90:10 as in instant claim 1, however, such a range is a property which can be easily determined by one of ordinary skill in the art. With regard to the limitation of the weight ratio range, absent a showing of unexpected results, it is obvious to modify the conditions of a composition because they are merely the result of routine experimentation. The experimental modification of prior art in order to optimize operation

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conditions (e.g. range) fails to render claims patentable in the absence of unexpected results. All of the aforementioned limitations are result effective as they control the level of binding and release of the coloring and release layers. As such, they are optimizable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the thermal transfer sheet with the limitation of the weight ratio range since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Response to Arguments

Applicants' argument filed March 18, 2002 have been fully considered but they are not persuasive.

On page 2, Applicants argue that Nakamura does not require that the candellila wax be compatible with the styrene resin. Examiner is not persuaded. Nakamura does definitely show that candellila wax and styrene resin are present in the thermal transfer sheet as in instant claim 1. It is not required that Nakamura specifically show that they are compatible as they are obviously compatible and effective together in the transfer sheet.

On page 2, Applicants argue that Nakamura permits, but does not require, the addition of wax into the resin of the ink layer directly rather than adding wax into the peel layer as in the instant invention. Examiner is not persuaded because this is an argument as to a method step which is not considered in the examination of product claims (i.e. thermal transfer sheet). Further, Nakamura does definitely show that a wax is included in the release layer (peel layer).

On page 3, Applicants argue that Nakamura does not teach, disclose, nor suggests that the thermal transfer recording medium has the wax-to-resin weight ratios and thermal conditions as

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in the instant invention. Examiner is not persuaded because this is an optimizable weight ratio range. It is obvious to modify the conditions of a composition because they are merely the result of routine experimentation. The experimental modification of prior art in order to optimize operation conditions (e.g. range) fails to render claims patentable in the absence of unexpected results. All of the aforementioned limitations are result effective as they control the level of binding and release of the coloring and release layers. As such, they are optimizable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the thermal transfer sheet with the limitation of the weight ratio range since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly T. Nguyen whose telephone number is (703) 308-8176.

The examiner can normally be reached on Monday to Friday, except on every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (703) 308-0449. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Kimberly T. Nguyen
Examiner
August 27, 2002

CYNTHIA H. KELLY
SENIOR PATENT EXAMINER
TECHNOLOGY CENTER 1700

